

# C-A OPERATIONS PROCEDURES MANUAL

## Text Pages 2 through 4

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>

Approved: \_\_\_\_\_ Signature on File \_\_\_\_\_  
Superconducting Magnet Division Head Date

C-A-OPM 14.34.1 (Y)

**C-A OSH  
OPERATIONAL CONTROLS FORM**

<b>Operational Controls Form for Occupational Safety and Health Hazards for C-AD and SMD Shops</b>	<b>Completed By: E. Lessard</b>  <b>Date: May 22, 2006</b>
<b>1. Operations:</b>  <p>The shop operations are located in various buildings at the accelerator complex managed by the Collider-Accelerator Department and Superconducting Magnet Division. The shops support the fabrication and maintenance of equipment, supplies and components used throughout the Department and Division. The machines utilized in the shops include milling machines, lathes, drill presses, band and table saws, grinders, shears, sanders, punches, breaks, benders, welding, brazing, soldering, grit blasters and parts cleaners. Magnet refurbishment work is also conducted in Building 922, where worn or damaged magnet components are repaired or replaced.</p>	
<b>2. Activities:</b>  <ul style="list-style-type: none"> <li>• Small-scale fabrication, assembly, maintenance, repair, and cleaning of metal, plastic and fiberglass equipment and parts</li> <li>• Soldering, metal cleaning, silver plating, coil maintenance, and cooling water hose and fitting repair</li> </ul>	
<b>3. Controls – Sub-Systems, Operations, Safety Review and Personal Protective Equipment, Emergency Response:</b>  <p>All controls at the C-A complex are under a <a href="#">Formal Conduct of Operations</a> (CO) and are described in detail in the <a href="#">C-A Operational Procedures (OPM)</a>, the <a href="#">SMD OPM</a> and the <a href="#">SMD Magnet Assembly Procedures</a>. Safety significant procedures included in the C-AD and SMD OPMs include:</p> <ul style="list-style-type: none"> <li>• <b>Sub-system Controls:</b> <a href="#">C-A OPM Chapter 8</a>: Subsystems, Rad- Storage,-Chipmunks,-Fencing, Experimental Areas, Water, Waste; <a href="#">SMD OPM Chapter 8</a>: Operation of Magnet Fabrication Tools and Cryogenic Systems</li> <li>• <b>Operational Controls:</b> <a href="#">C-A OPM Chapter 2</a> - LOTO, Maintenance, Work Planning; <a href="#">SMD OPM Chapter 2</a>: Guidelines for the Conduct of Operations (Work Planning)</li> <li>• <b>Safety Review and Personnel Protective Equipment:</b> <a href="#">C-A OPM Chapter 9</a> and <a href="#">BNL Handbook on Personal Protective Equipment (PPE) Selection and Use</a> - Radiation Safety, ESH Committees, ESH Review, ALARA, Safety Inspection, Cryogenic Safety; <a href="#">SMD OPM Chapter 2</a>: Guidelines for the Conduct of Operations (Work Planning and Operation of the ESH&amp;Q Office)</li> <li>• <b>Emergency Response Controls:</b> <a href="#">C-A OPM Chapter 3</a>, Emergency Procedures; <a href="#">SMD OPM Chapter 3</a>: Local Emergency Plan</li> </ul>	

#### **4. Maintenance:**

- [C-A OPM Chapter 2](#) - LOTO, Maintenance, Work Planning
- [C-A OPM Chapter 7](#) - Cryogenic Operations
- [C-A OPM Chapter 8](#) - Subsystems, Rad- Storage,-Chipmunks,-Fencing, Experimental Areas, Water, Waste
- [C-AD Group Procedures](#) – Collider-Accelerator Department, Specific Group Procedures
- [SMD OPM Chapter 2](#): Guidelines for the Conduct of Operations (Work Planning)
- [SMD OPM Chapter 8](#): Operation of Magnet Fabrication Tools and Cryogenic Systems

#### **5. Actions to be Taken if Control Fail:**

- [C-A CO Chapter 4](#) - Communications
- [C-A CO Chapter 6](#) - Investigation of Abnormal Occurrences
- [C-A OPM Chapter 3](#) - Emergency Procedures
- [C-A OPM Chapter 10](#) – Occurrence Reporting
- [SMD OPM Chapter 3](#): Local Emergency Plan
- [SMD OPM Chapter 2](#): Guidelines for the Conduct of Operations

#### **6. Records:**

- [C-A CO Chapter 10](#) - Independent Verification
- [C-A CO Chapter 11](#) - Logkeeping
- [C-A OPM Chapter 13](#) - Quality Assurance
- [SMD OPM Chapter 2](#): Guidelines for the Conduct of Operations
- [Job Risk Assessments](#) and [Facility and Area Risk Assessments](#)

**7. Responsibilities:** (a) to ensure controls are in place; (b) to ensure controls keep working; (c) to take action when controls fail; (d) to create and keep records relative to operational controls

- R2A2s
- [C-A OPM Chapter 1](#) - Policies for Authorization, Training, Environment, Safety, Procedures, Minors, Visitors
- [C-A CO Chapter 1](#) - Organization and Administration
- [SMD OPM Chapter 2](#): Guidelines for the Conduct of Operations

Name	Responsibility
Responsible and authorized personnel are listed and maintained in the C-A Operational Procedures Manual and the SMD Operations Procedure Manual	<a href="#">C-A OPM 1.1</a> - Authorization  <a href="#">C-A OPM 1.11</a> - Department Requirements for Interaction with C-A  <a href="#">C-A OPM 10.1</a> - Occurrence Reporting and Processing of Operations Information  <a href="#">SMD OPM Chapter 2</a> : Guidelines for the Conduct of Operations

**8. Training:**

Name	Training	Training Policy
Training data is maintained in <a href="#">BTMS</a>	See specific Job Training Assessments (JTAs) in BTMS	<a href="#">C-A PM 1.12</a> – Training and Qualification Plan  <a href="#">C-A OPM 1.12.b</a> - Instructors Qualified By Department Position or Authority  <a href="#">OPM 1.12.c</a> - C-A Facility-Specific Briefing Form for Unescorted Contractors  <a href="#">SMD OPM Chapter 2</a> : Training and Qualification